University of Groningen

An older-age advantage? Emotion regulation and emotional experience after a day of work

Scheibe, Susanne; Spieler, Ines; Kuba, Katharina

Published in:
Work, Aging and Retirement

DOI:
[10.1093/workar/waw010](https://doi.org/10.1093/workar/waw010)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2016

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Scheibe, S., Spieler, I., & Kuba, K. (2016). An older-age advantage? Emotion regulation and emotional experience after a day of work. *Work, Aging and Retirement*, 2(3), 307-320.
<https://doi.org/10.1093/workar/waw010>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

An Older-Age Advantage? Emotion Regulation and Emotional Experience After a Day of Work

Susanne Scheibe¹, Ines Spieler^{2,3}, and Katharina Kuba^{1,4}

1. Department of Psychology, University of Groningen, Groningen, The Netherlands

2. Bremen International Graduate School of Social Sciences, Bremen, Germany

3. Jacobs University Bremen, Bremen, Germany

4. Department of Medical Psychology and Medical Sociology, University of Leipzig, Leipzig, Germany.

ABSTRACT

The goal of this study was to investigate age differences in emotional experience after a day of work, and the role of emotion-regulation strategy use in shaping emotional experience. Based on the lifespan literature, we predicted that older workers enjoy higher emotional well-being, in particular in terms of higher levels of low-arousal positive emotions and lower levels of high-arousal negative emotions, than young workers. We further predicted that age differences in emotional experience are mediated by a more adaptive profile of habitual emotion-regulation strategy use in older compared to young workers. Multilevel mediation analysis of 832 daily surveys completed by 92 healthcare professionals failed to provide evidence of age differences in after-work emotions. Yet, age was indirectly associated with emotional experience via enhanced use of adaptive strategies (e.g., positive reappraisal, savoring) and lower use of maladaptive strategies (e.g., rumination, fault finding). Overall, findings support an older-age advantage in emotion regulation, which in turn, benefits emotional well-being in the evening, a time of day that is essential for recovery from work demands.

Given workforce aging, researchers as well as practitioners have become increasingly interested in learning about how age impacts on daily work experiences and the implications for human resource practice (Hertel & Zacher, 2015; Scheibe & Zacher, 2013; Truxillo, Cadiz, & Hammer, 2015). An important class of daily work experiences pertains to the emotional states workers experience in relation to their work. Besides being a core aspect of occupational well-being, emotional states are considered to constitute a major pathway through which the work context influences job-related attitudes and behaviors (Weiss & Cropanzano, 1996). Employees' emotional experience has been shown to drive numerous critical organizational outcomes, such as creativity, turnover, prosocial behavior, leadership, and customer satisfaction and loyalty (Barsade & Gibson, 2007). A better understanding of age differences in work-related emotional experiences can thus provide important information to researchers and practitioners aiming to maximize worker's well-being at different ages, and the associated organizational outcomes.

The literature outside the organizational setting has accumulated considerable evidence pointing to improvements in emotional well-being with age, and has identified age differences in emotion regulation as explanatory mechanism underlying the age–well-being association (Charles, 2010; Scheibe & Zacher, 2013, for review). Building on this literature, the aim of the current study was to test whether previous findings generalize to worker samples. The working population

represents a much smaller age segment than the population of aging individuals typically studied in the lifespan literature: Whereas older workers are typically not older than 65 years, many lifespan samples include older adults well into their 90s. Moreover, worker samples tend to be positively selected due to ill-functioning workers dropping out of the workforce. Consequently, it remains unclear whether age-related advantages in emotional experience and regulation identified in the lifespan literature are present in the working population (Scheibe, Wisse, & Schulz, 2015).

In the current study, we took a differentiated look at emotional experiences of workers differing in *valence*—the hedonic quality of emotional states—and *arousal*—the level of energy associated with emotional states (Russell, 2003). This decision was based on recent evidence that age trajectories of emotions depend on the type of emotional experience considered (e.g., English & Carstensen, 2014; Kessler & Staudinger, 2009; Scheibe, English, Tsai, & Carstensen, 2013), and that different types of emotional experience have different work-related correlates and outcomes (Schaufeli & Salanova, 2014; Warr, Bindl, Parker, & Inceoglu, 2014). In particular, we assessed whether age differences in emotional experience characterized by different valence-arousal combinations are apparent among workers in emotionally demanding occupations upon returning home from work in the evening, a time of day that holds special significance for recovering from work and replenishing resources (Sonnentag, 2012). We

further tested age differences in habitual emotion-regulation strategy use as explanatory mechanism linking age with emotional experience.

Age-Related Differences in Emotional Experience

Evidence from general population samples

Age-related differences in emotional well-being from early to late adulthood are well-documented in general-population samples comprising both working and non-working adults (Charles & Carstensen, 2010; Morgan & Scheibe, 2014, for review). Cross-sectional (Mroczek & Kolarz, 1998; Riediger, Schmiedek, Wagner, & Lindenberger, 2009; Stone, Schwartz, Broderick, & Deaton, 2010) as well as longitudinal evidence (Carstensen et al., 2011; Charles, Reynolds, & Gatz, 2001) suggests that emotional experience tends to become overall more positive and less negative as people grow older.

At the same time, variations in age trends of emotional experience are typically observed in general-population samples when distinguishing levels of arousal. Lawton, Kleban, Rajagopal, and Dean (1992) found that older adults report experiencing less often high-arousal emotions, whether positive or negative, than young adults (see also Ross & Mirowsky, 2008). Regarding positive emotions, a cross-sectional (Kessler & Staudinger, 2009) and two experience-sampling studies (English & Carstensen, 2014; Scheibe et al., 2013) all observed older adults to experience higher levels of low-arousal positive (LAP) emotions (calm, content) than young adults, but equal levels of high-arousal positive (HAP) emotions (excited, enthusiastic). Regarding negative emotions, two large-scale survey studies indicate that older adults are less likely than young adults to experience anger, a high-arousal negative (HAN) emotion, but equally likely to experience sadness, a lower-arousal negative (LAN) emotion (Kunzmann, Richter, & Schmukle, 2013; Stone et al., 2010). The same divergent age trends have been found for the experience of HAN (angry, anxious/worried) and LAN emotions (bored, fatigued) in response to emotional events in the laboratory (e.g., Charles & Carstensen, 2008) and in real life (e.g., Scheibe, Mata, & Carstensen, 2011). However, not all evidence supports the trends toward reduced HAN emotions and comparable LAN emotions with age (English & Carstensen, 2014; Kessler & Staudinger, 2009). Notwithstanding some inconsistent findings regarding negative emotions, the overall picture of age differences in general-population samples suggests a trend from negative to positive and from high-arousal to low-arousal emotional experiences. Consequently, age differences tend to be most pronounced for LAP and HAN emotions.

Evidence from worker samples

There are only a handful of studies on age and emotional experience in samples exclusively comprised of working adults. In two studies with customer service employees, age was associated with higher levels of positive emotions (negative emotions were not assessed; Dahling & Perez, 2010; Sliter, Chen, Withrow, & Sliter, 2013). In another study of call center employees, age was associated with both higher levels of positive and lower levels of negative emotions (Wegge, van Dick, Fisher, West, & Dawson, 2006). Bal and Smit (2012) found age to be related to reduced negative emotions but unrelated to positive emotions. Another cross-sectional study (K. Lee & Allen, 2002) and two experience-sampling studies (Sonnentag, Binnewies, & Mojza, 2008; Yeung & Fung, 2012), however, found levels of positive and negative emotions to be unrelated to age. Taken together, the evidence on age

differences in emotion experience in worker samples is mixed, but if age trends are observed, they consistently point in the direction of overall more positive or less negative emotional experience.

So far, none of the studies on age and emotional experience in worker samples has distinguished emotional states in terms of both valence and arousal. This is an important gap not only because of the divergent age trends observed in general-population samples, but also because different types of emotional experience appear to have unique work-related correlates and consequences. HAP emotions have been linked to work engagement, an energized motivational state that is thought to result from the perception of wanting more from the job than it provides (poor person–job fit; Schaufeli & Salanova, 2014; Warr & Inceoglu, 2012). Such perceptions, in turn, lead workers to be proactive and seek new challenges (Warr et al., 2014) and perform at a high level (Christian, Garza, & Slaughter, 2011). In contrast, LAP emotions have been linked to job satisfaction and the perception of a good fit with the job (Warr & Inceoglu, 2012), which feeds into a general sense of life satisfaction (Heller, Watson, & Ilies, 2006) and the desire to remain in the organization (Meyer, Stanley, Herscovitch, & Topolnysky, 2002). HAN emotions have been linked to workaholism, the strong drive to work excessively hard (Schaufeli & Salanova, 2014), but also to counterproductive work behaviors involving aggression and sabotage (Spector & Fox, 2002). In contrast, LAN emotions (particularly boredom and fatigue) have been linked to burnout (Schaufeli & Salanova, 2014) and have been shown to predict counterproductive work behaviors signaling personal withdrawal (Warr et al., 2014). Investigating age trends for high and low-arousal emotions separately therefore provides important information about older workers' advantages or disadvantages when it comes to key work-related outcomes.

In sum, considering the divergent age patterning of the different types of emotional experience and their unique work-related correlates and consequences, a full understanding of worker age differences in emotional experience will require decomposing emotions into more fine grained categories of valence-arousal combinations. In the present study, we sampled after-work emotions repeatedly across two work weeks to obtain reliable estimates of workers' emotional states after a day of work. It has previously been shown that affect experienced in nonwork periods predicts affect subsequently experienced at work, which in turn influences workers' motivation and performance (Sonntag, 2012). As mentioned earlier, general population studies demonstrate age-related trends toward more positive and less arousing emotional experiences. A combination of these trends suggests that age differences are most pronounced for LAP and HAN emotions. This let us to formulate

Hypothesis 1: Age is (a) positively related to positive after-work emotions and (b) negatively related to negative after-work emotions. Age associations are stronger (c) for LAP emotions than HAP emotions and (d) for HAN emotions than LAN emotions.

The Role of Emotion Regulation Strategy Use

When positive age-related trends in emotional well-being were first observed, they were met with surprise by many researchers and the general public (Kunzmann, Little, & Smith, 2000). After all, in the minds of most people, the process of aging is associated with loss and decline. In the work context, older adults are stereotyped to be

less productive than young adults (Posthuma & Campion, 2009) and to have low emotional resilience (Rauschenbach, Göritz, & Hertel, 2012). Subsequent research efforts to understand the so-called “well-being paradox of aging” have, however, identified a number of explanatory mechanisms, among them an improved competence to regulate emotions with age (Charles, 2010; Morgan & Scheibe, 2014; Scheibe & Zacher, 2013). As emotion-laden events, ranging from daily stressors to major life events, are experienced and resolved throughout life, people are assumed to gain knowledge and develop skills to regulate their emotions in ways that promote emotional well-being (Blanchard-Fields, 2007; Charles, 2010).

Emotion regulation denotes people's goal-directed behaviors aimed at modifying the nature, duration, or intensity of emotional responses (Gross, 2015). To regulate emotions, people can apply a myriad of regulatory strategies. These can range from behaviors aimed at modifying the emotion-laden situation (e.g., situation modification, sharing emotions with others) to cognitive control processes aimed at modifying the incoming emotional information (e.g., savoring, distraction, positive reappraisal, fault finding) to strategies that directly change the emotional response (e.g., suppression, substance use; Gross, 2015).

Adaptive and maladaptive emotion regulation strategies

Importantly, strategies differ in their potential to promote or undermine general well-being and mental health (John & Gross, 2004). A large body of evidence, including meta-analytic findings, suggests that the habitual use of certain strategies is positively related to well-being and mental health (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Hülshager & Schewe, 2011; John & Gross, 2004) and ability measures of emotional intelligence (Peña-Sarrionandia, Mikolajczak, & Gross, 2015), whereas the habitual use of other strategies is negatively related to these variables. For instance, when it comes to down-regulating negative emotions, *positive reappraisal* (reinterpreting a negative event in positive ways) and *situation modification* (changing a stressful situation so as to limit its negative impact) can be classified as generally adaptive, whereas *rumination* (thinking repetitively about the causes and consequences of stressful events) and *substance use* can be classified as maladaptive (Aldao et al., 2010).

To up-regulate positive emotions, *savoring* (directing attention to positive aspects of a situation) and *positive mental time travel* (engaging in positive reminiscence or anticipation of a positive event) can be classified as adaptive, whereas *fault finding* (thinking of negative aspects of positive events or how things could have been better) and *suppression* (concealing positive emotions) can be classified as maladaptive (Nelis, Quoidbach, Hansenne, & Mikolajczak, 2011; Quoidbach, Berry, Hansenne, & Mikolajczak, 2010). In the context of emotional labor, *deep acting* (trying to experience feelings required in client interactions) is generally adaptive and *surface acting* (modifying only the outward expression) is maladaptive (Hülshager & Schewe, 2011).

Most studies so far have examined regulation strategies individually, but there is also evidence that they can be meaningfully combined into broader categories of adaptive and maladaptive strategies (Garnefski, Kraaij, & Spinhoven, 2001; Nelis et al., 2011). In the current study, we adopted this approach and expected to replicate links between groups of strategies classified as generally adaptive or maladaptive and after-work emotions.

Hypothesis 2: (a) Use of adaptive emotion regulation strategies is related to higher levels of positive and lower levels of negative after-work emotions, while (b) use of maladaptive strategies is related to lower levels of positive and higher levels of negative after-work emotions.

Age differences in strategy use

As they grow older, it is assumed that most people will learn about the differential longer-term outcomes of emotion regulation strategies, and adjust their behavior accordingly (Charles, 2010; Morgan & Scheibe, 2014). They may have learned that positive reappraisal or sharing of negative emotions with others effectively reduces the long-term detrimental impact of stressors, whereas rumination and substance use enhance it. Relatedly, they may have come to realize that savoring and engaging in positive reminiscence more effectively enhance and prolong positive emotions, whereas fault finding and concealing positive feelings toward others diminish them. As a result, older adults are assumed to more effectively regulate emotions partly because they use adaptive strategies more often, and maladaptive strategies less often than young adults (Morgan & Scheibe, 2014).

A systematic review of the literature on age differences in emotion regulation competence revealed that most (though not all) existing studies find older adults indeed show a more adaptive profile of emotion regulation strategy use (Doerwald, Scheibe, Zacher, & Van Yperen, 2016). To illustrate, in a general-population sample of women, John and Gross (2004) found that middle-aged women reported using more reappraisal and less suppression now than they recalled using at age 20 and compared to a group of young women (see also Phillips, Henry, Hosie, & Milne, 2006). Blanchard-Fields, Mienaltowski, and Seay (2007) found that experts rate strategies that older adults endorsed for dealing with everyday emotion-laden scenarios as more effective than the strategies endorsed by young adults. Evidence in worker samples also partly supports an older-age advantage in emotion regulation strategy use. In one study with workers from multiple sectors, age was positively associated with problem-focused coping (Hertel, Rauschenbach, Thielgen, & Krumm, 2015), but other research with service workers indicates no age differences in use of this strategy (Johnson, Holdsworth, Hoel, & Zapf, 2013). Additionally, older service workers tend to report using more deep acting and/or less surface acting compared to young workers (Dahling & Perez, 2010; Sliter et al., 2013; Yeung, Wong, & Lok, 2011; but see Bal & Smit, 2012). Based on these findings, we formulated

Hypothesis 3: Age is related to (a) higher use of adaptive emotion-regulation strategies and (b) lower use of maladaptive emotion-regulation strategies.

As mentioned earlier, a higher emotion regulation competence, as manifested in a more adaptive profile of strategy use, is considered one key mechanism underlying positive age differences in emotional well-being. Through experience garnered from daily and life events, older adults are assumed to improve in emotion regulation competence, which benefits their emotional experience in daily life (Charles, 2010). Interestingly, although links between age differences

in adaptive strategy use and age differences in emotional well-being are often assumed, there is only little direct empirical demonstration of a mediating process (Isaacowitz & Blanchard-Fields, 2012). Kessler and Staudinger (2009) provide indirect evidence by showing that older adults' stronger tendency to up-regulate positive and down-regulate negative emotions in the face of difficulties mediates positive age differences in emotional experience; however, specific strategies were not assessed. Hertel and colleagues (2015) found in a heterogeneous worker sample that increased use of problem solving mediated negative age differences in strain experiences several months later, but use of reappraisal did not. In a service context, older workers' higher use of reappraisal partially mediated the positive relationship between age and positive affect (Yeung et al., 2011), and higher use of deep acting mediated the positive relationship between age and job satisfaction (Cheung & Tang, 2010). In the current study, we aimed to provide additional evidence for the frequent assertion that shifts in strategy use underlie positive age differences in emotional experience.

- Hypothesis 4:* (a) Higher use of adaptive emotion regulation strategies and (b) lower use of maladaptive emotion regulation strategies mediate age differences in after-work emotions.

We tested our hypotheses in a sample of healthcare workers using a diary design in order to sample after-work emotions across two work weeks. Healthcare is an occupational sector characterized by high emotional job demands (Glomb, Kammeyer-Mueller, & Rotundo, 2004), which would render emotion regulation particularly important for emotional well-being and the associated work outcomes. We sought to characterize emotional experience in the evenings during after-work time. After-work time has recently received much research attention as a time for recovery and replenishing resources, which impacts on how people feel the next day at work and how well they can perform their work (Sonnentag, 2012). In contrast to most prior literature on worker age differences in affect, we sampled current emotional experience across multiple days, rather than retrieving global reports of emotional experience (e.g., Bal & Smit, 2012; Dahling & Perez, 2010; K. Lee & Allen, 2002). This procedure allows assessing emotional experience much more accurately than with retrospective, memory-based reports (Robinson & Clore, 2002). This is particularly relevant in the context of aging: Older adults tend to show positively biased recall of emotional situations relative to young adults, a phenomenon termed the "positivity effect" (Reed & Carstensen, 2012).

METHOD

Participants

The sample consisted of 95 adults from the greater rural area of a mid-size German city. All participants were employed in the health care sector (e.g., private physician practices, pharmacies, ambulant nursing, physiotherapy practices) and were recruited by contacting local organizations, via word-of-mouth, and from the social network of one of the authors. Three respondents dropped out of the study after completing the baseline questionnaire and were excluded from analyses, resulting in a final sample of 92 participants. Participants were between 17 and 64 years old with an average of 43.47 years ($SD = 11.14$) and 82% were women. The average job tenure was 8.83 years ($SD = 7.80$; range from

less than 1 year to 32 years); the average work hours per day were 7.36 ($SD = 1.91$; range from 3 to 12 hr); and average client contact per day was 5.44 hr ($SD = 2.41$, range from less than 1 to 12 hr). Of the sample, 52% reported having supervisory responsibilities, with the number of supervisees ranging from 1 to 48 ($M = 13$, $SD = 11$).

As incentive for participation, participants received individual feedback about their emotion regulation profile, which was retrievable online via a self-generated code, and had the chance to win one of two vouchers for an online marketplace worth 100€. Results for this sample concerning individual differences in acceptance and daily occupational well-being were previously reported (Kuba & Scheibe, in press). This previous report did not have age as a focal variable, and did not include analyses of emotion-regulation strategies or subtypes of negative emotions.

Procedure

The study was conducted online and consisted of a baseline survey followed by 10 diary entries completed after work. In the baseline questionnaire, we assessed habitual use of emotion regulation strategies as well as demographic and job-related information. In the diaries, we assessed momentary after-work emotions and other variables not included in this report. Participants were asked to indicate usual work days to facilitate sending the links for diary entries only on days at which respondents worked. Since most participants worked in shifts, which may end in the morning, we emailed links for the diary surveys at 10 a.m. and asked respondents to complete the surveys after work but before going to bed. Due to a system error, some participants were sent diary surveys on up to 17 days. Additionally, some participants completed more than one entry per day, presumably to make up for missing entries on the prior day. Therefore, only the last entry per day was retained, resulting in a sample of 832 effective entries. The number of completed diary entries per person ranged from 1 to 15 ($M = 9.04$, $SD = 2.36$); the mean completion rate across participants (calculated as the proportion of usable daily surveys out of 10) was 88%.

Measures

Emotion-regulation strategy use

Participants completed a shortened version of the Emotion Regulation Profile-Revised (ERP-R; Nelis et al., 2011). This instrument assesses emotion regulation strategy use with vignettes that describe emotion-eliciting scenarios. In order to reduce participant burden, we selected six scenarios that appeared most applicable to working-age adults; three scenarios targeted negative emotions (jealousy, sadness, anxiety) and three scenarios targeted positive emotions (pride, joy, satisfaction). The six emotions represent all four quadrants of the affect circumplex model (Russell, 2003). For each scenario, eight possible reactions were presented in randomized order, four of them classified as adaptive and four classified as maladaptive based on their documented consequences for well-being and mental health (Aldao et al., 2010; Nelis et al., 2011; Quoidbach et al., 2010) and link with emotional intelligence measures (Peña-Sarrionandia et al., 2015). Participants indicated for each scenario which of the strategies would most closely resemble their reaction to the situation described; they could endorse multiple responses.

For the negative scenarios, the adaptive strategies were *positive reappraisal*, *emotion sharing*, *distraction*, and *situation modification*;

the maladaptive strategies were *rumination*, *acting out*, *learned helplessness*, and *substance abuse*. For the positive scenarios, the adaptive strategies were *savoring*, *emotion expression*, *positive mental time travel*, and *capitalizing*; the maladaptive strategies were *fault finding*, *emotion suppression*, *inattention*, and *negative mental time travel*. Definitions of strategies are given in Table 1. We created the sum of adaptive and maladaptive strategy endorsement per scenario and aggregated these across scenarios. Cronbach's alphas were .75 for adaptive and .63 for maladaptive strategy use.

We conducted two validity checks of the emotion regulation measure. First, after completing the ERP-R, participants rated on a scale from 1 (*not at all*) to 5 (*very much*) how well they could put themselves into the situations described ($M = 4.23$, $SD = 0.57$), and how well their responses reflected their natural reactions ($M = 3.98$, $SD = 0.49$). The means indicate that the ERP-R is a good reflection of participants' conscious emotion regulation strategy use in daily life. Second, to confirm

the categorization of adaptive and maladaptive strategies, three experts (two practicing psychotherapists with 21 and 23 years of experience, respectively, and one psychotherapist in training) rank-ordered the eight responses per vignette according to how effective they considered them to be for maintaining emotional well-being in the long term, from Rank 1 (*most effective*) to Rank 8 (*least effective or counterproductive*). The mean rank of the four adaptive strategies (negative scenarios 2.9; positive scenarios 2.6) was considerably higher than the mean rank of the four maladaptive strategies (negative scenarios 6.1; positive scenarios 6.4). This supports the interpretation of scale scores as reflecting adaptive and maladaptive emotion-regulation strategy use. See Table 1 for the rank scores of individual strategies.

Daily after-work emotions

Emotional experience was measured with a validated German self-report emotion checklist (Kessler & Staudinger, 2009). Participants

Table 1. Overview of Emotion Regulation Strategies Measured by the Emotion Regulation Profile-Revised (ERP-R)

Strategy	Definition (Nelis et al., 2011)	Effectiveness Ranking ^a	
		M	SD
Negative emotion scenarios			
Adaptive strategies			
Positive reappraisal	Reinterpreting the situation in positive ways in order to reduce its emotional impact	1.67	1.32
Emotion sharing	Sharing emotions with others	2.11	0.60
Distraction	Thinking of matters or engaging in activities unrelated to the negative emotion	3.78	0.67
Situation modification	Modifying the situation to reduce its emotional impact	3.89	2.47
Maladaptive strategies			
Rumination	Thinking about the causes and negative emotional reactions to the situation	5.44	1.94
Acting out	Giving way to the action tendency associated with the emotion (aggression, withdrawal)	5.78	1.56
Learned helplessness	Thinking that one has no power to change the situation	6.56	1.13
Substance abuse	Consuming alcohol, drugs, or other substances to reduce negative emotions	6.78	1.09
Positive emotion scenarios			
Adaptive strategies			
Savoring	Directing attention to the positive situation and emotion	1.56	0.72
Emotion expression	Expressing the positive emotion with nonverbal behavior	2.33	1.00
Positive mental time travel	Engaging in positive reminiscence or anticipation of the positive event	2.89	1.17
Capitalizing	Communicating and celebrating positive events with others	3.67	1.66
Maladaptive strategies			
Fault finding	Thinking of negative aspects of the positive events or that things could have been better	5.67	1.41
Emotion suppression	Suppressing positive emotion expression	6.11	1.05
Inattention	Thinking of matters or engaging in activities unrelated to the positive event	6.22	0.83
Negative mental time travel	Engaging in negative reminiscence (making external attributions) or negative anticipation (positive emotion won't last)	7.56	0.88

^aEffectiveness rankings were provided by three experts across three vignettes (see Measures section for details). Lower rank scores indicate that the strategy is considered more effective in maintaining long-term well-being.

were asked to indicate for 12 different emotions to what extent they experience these right now on a scale from 1 (*very slightly or not at all*) to 5 (*extremely*). The 12 items covered four quadrants of the emotion circumplex model (Russell, 2003): HAP emotions (*excited, euphoric, delighted*), LAP emotions (*relaxed, at ease, resting in oneself*), HAN emotions (*annoyed, nervous, worried*), and LAN emotions (*down, lethargic, sluggish*). A multilevel confirmatory factor analysis conducted with Mplus 7 (Muthén & Muthén, 1998–2012) indicated that a four-factor model fit the data better ($\chi^2 = 292.09$; $df = 97$; CFI = .91; RMSEA = .05; Omega = .88) than either a two-factor model distinguishing positive and negative emotions ($\chi^2 = 578.96$; $df = 106$; CFI = .78; RMSEA = .07; Omega = .83; Satorra-Bentler scaled $\chi^2 = 234.77$; $df = 9$; $p < .001$) or a one-factor model ($\chi^2 = 752.72$; $df = 108$; CFI = .70; RMSEA = .09; Omega = .18; Satorra-Bentler scaled $\chi^2 = 313.37$; $df = 11$; $p < .001$).

Control variables

We accounted for participants' gender in the analyses, to account for the unequal gender distribution and prior evidence of gender differences in emotionality (Labouvie-Vief, Lumley, Jain, & Heinze, 2003). Moreover, we accounted for participants' job tenure (i.e., how many years they have worked in the current function). Following the suggestion of an anonymous reviewer, we further controlled for supervisory responsibility, average duration of client contact per day, and emotional job demands to rule out that any associations between age and after-work emotions may be due to age differences in these variables. All control variables were measured in the baseline questionnaire. Specifically, participants indicated whether or not they had supervisory responsibility (0 = no; 1 = yes), and the average duration of daily client contact in hours. Using subscales of the Frankfurt Emotion Work Scale (Zapf, Vogt, Seifert, Mertini, & Isic, 1999), we further measured emotional display demands (the requirement to show positive or neutral emotions toward clients; six items; Cronbach's $\alpha = .70$) and sensitivity demands (the requirement to sense the clients' feelings; three items, Cronbach's $\alpha = .91$). Both of these emotional job demands

have been shown to impact on older workers' occupational well-being and health (Scheibe, Stamov-Roßnagel, & Zacher, 2015).

Statistical Analyses

Our data had a nested structure, including variables at both the person level and the day level. Using Mplus 7, we therefore performed a multilevel structural equation modeling (MSEM) analysis (Preacher, Zyphur, & Zhang, 2010) to test our model that age, via higher adaptive and lower maladaptive emotion-regulation strategy use as mediators, influenced the four types of after-work emotional experience. The model is depicted in Figure 1. At the within-person level, we modeled after-work emotions (HAP, LAP, HAN, and LAN), controlling for time effects (Bolger & Laurenceau, 2013). At the between-person level, we modeled age, adaptive strategy use, and maladaptive strategy use as predictors of after-work emotions. Emotion ratings at the person-level represent person-specific means of the aggregated daily after-work emotion ratings. We let the residual variances of HAP and LAP as well as HAN and LAN emotions correlate at both levels of analysis.

When running MSEM analyses in Mplus, stable between-subject differences (trait; Level 2) and within-subject variability (state; Level 1) in emotions are disentangled (Bolger & Laurenceau, 2013). To this end, Mplus decomposes the manifest variables into two latent (within-person and between-person) components (Muthén & Muthén, 1998–2012; Preacher et al., 2010). This procedure substitutes the person-mean centering of emotions, which we assessed at Level 1. Following Enders and Tofghi (2007), we grand-mean centered the continuous person-level predictors (i.e., age and emotion regulation strategies) and the continuous control variables (tenure, hours with client contact, emotional job demands). We did not center the dichotomous control variables (gender, supervisory responsibility). Given the limited sample size, the control variables were entered into the analyses one at a time to preserve power.

We used Monte Carlo estimation method for assessing the indirect mediation effects, with an interactive tool for creating confidence intervals for indirect effects in R (Selig & Preacher, 2008). The advantage

Figure 1. Final model (M_2) with unstandardized coefficients. Age and strategy use was measured at the person level; after-work emotions were measured at the day level in the evening. At the day level, we controlled for time effects. HAP = high arousal positive emotions, LAP = low arousal positive emotions, HAN = high arousal negative emotions, LAN = low arousal negative emotions. Dotted lines represent relationships at trend level. Results were robust when accounting for gender, job tenure, supervisory responsibilities, duration of client contact per day, emotional display demands, and emotional sensitivity demands. $^{\dagger}p < .10$. $^*p < .05$. $^{**}p < .01$. $^{***}p < .001$.

of this estimation method is that it provides unbiased estimates for indirect effects because it does not, unlike the delta method in Mplus, make any assumptions about their distribution (Preacher et al., 2010).

RESULTS

Preliminary Analyses

Before testing hypotheses, we calculated null models to determine the proportion of variance in the four types of after-work emotions that is located at between-person and within-person levels. We found that between 49.6% and 53.5% of the total variance in emotional experiences was located at the within-person level (Table 2). Thus, multilevel modeling appears to be an appropriate procedure for analyzing the data.

Table 2 also shows descriptive statistics and within- and between-person correlations of the study variables. At the person level, age was not significantly related to any type of emotions, failing to support Hypothesis 1. Nevertheless, we note that trend-level effects for LAP ($r = .19, p < .10$) and HAN ($r = -.17, p < .10$) were in the hypothesized direction. At the person level, adaptive strategy use was positively related to positive emotions (LAP, HAP) and negatively related to HAN (and LAN at the trend level); whereas maladaptive strategy use was negatively related to LAP (and HAP at the trend level) and positively to LAN. These associations between habitual strategy use and person-level aggregates of after-work emotions provide preliminary support for Hypotheses 2a and 2b. Age was moreover positively related to adaptive emotion-regulation strategy use ($r = .42, p < .001$) and negatively related to maladaptive emotion-regulation strategy use ($r = -.26, p < .05$), providing preliminary support for Hypotheses 3a and 3b.

Regarding the control variables gender and job tenure were not significantly related to any of the emotion variables. We note that very similar patterns of results emerged when gender and job tenure were included into our model, that is, neither signs nor significance levels changed. Further, young and older workers did not differ in their likelihood to be in a supervisory position ($r = .03, p > .10$), and adding supervisory position to the model did not change the relations of age with after-work emotions. Daily hours with clients were negatively related with age ($r = -.30, p < .01$), and the duration of client contact per day was positively related with more HAN ($r = .32, p < .01$) and more LAN ($r = .33, p < .01$), indicating that participants who were in contact with clients longer reported more HAN and LAN. Adding daily hours with clients to the model did not change the relations of age with after-work emotions. Age was unrelated to both emotional display ($r = -.06, p > .10$) and sensitivity demands ($r = .12, p > .10$), suggesting that young and older workers did not differ in their perceived emotional job demands. Display demands were positively related with HAN ($r = .21, p < .05$). Adding display and sensitivity demands in our model did not change the relations of age with after-work emotions. For the purpose of brevity, we report in the following the results from the models that did not include control variables.

Testing Hypotheses

In a first model (M_1), we tested whether age was related to any type of emotional experience without accounting for emotion regulation strategy use. According to Hypotheses 1a and 1b, age should be positively related to LAP and HAP and negatively related to LAN and

HAN (H1a), with stronger associations for LAP relative to HAP and HAN relative to LAN (H1b). Our results reveal that age was unrelated to all emotion types (HAP: .00; LAP: .01; HAN: -.01; LAN: .01; all $ps > .05$). Thus, Hypotheses 1a and 1b were not supported.

We tested the remaining hypotheses in a second—and final—model (M_2), in which we included adaptive and maladaptive strategy use into the analyses. Results are presented in Table 3 and illustrated in Figure 1. According to Hypothesis 2, adaptive (H2a) and maladaptive strategy use (H2b) is linked to after-work emotions. Employees with higher adaptive emotion regulation strategy use did, compared to employees with lower adaptive emotion regulation strategy use, report better emotional well-being after work, that is, more HAP ($\beta_3 = .055, p < .01$) and less HAN ($\beta_5 = -.041, p < .05$). Effects for LAP ($\beta_4 = .041, p < .10$) and LAN ($\beta_6 = -.037, p < .10$) failed to reach significance, but were in the expected direction. Employees with higher maladaptive emotion regulation strategy use did, compared to employees with lower maladaptive emotion regulation strategy use, report worse emotional well-being, that is, less HAP ($\beta_7 = -.059, p < .05$), less LAP ($\beta_8 = -.077, p < .05$), and more LAN ($\beta_{10} = .076, p < .05$). Maladaptive emotion regulation strategy use was unrelated to HAN ($\beta_9 = .017, p > .15$). Thus, Hypotheses 2a and 2b were generally supported, although not for all types of emotional experience.

According to Hypothesis 3, age is positively associated with adaptive emotion-regulation strategy use (H3a) and negatively associated with maladaptive emotion regulation strategy use (H3b). We found older employees to report more adaptive emotion regulation strategy use ($\beta_1 = .139, p < .001$) and less maladaptive emotion regulation strategy use ($\beta_2 = -.045, p < .01$). Thus, both Hypotheses 3a and 3b were supported.

According to Hypothesis 4, higher use of adaptive emotion regulation strategies (4a) and lower use of maladaptive emotion regulation strategies (4b) should mediate the age differences in emotions. As can be seen, age had indirect effects on after-work emotions via adaptive and maladaptive emotion regulation strategy use. In support of Hypothesis 4a, the indirect effect age $\rightarrow$ adaptive emotion regulation strategy use $\rightarrow$ emotion was significant for HAP ($\beta_{15} = .008, p < .01$) and HAN ($\beta_{17} = -.006, p < .05$). The indirect effects on LAP and LAN were not estimated because the relationship between adaptive strategy use (the mediator) and the emotion (the outcome) failed to reach significance. In support of Hypothesis 4b, the indirect effect age $\rightarrow$ maladaptive emotion regulation strategy use $\rightarrow$ emotion was significant for HAP ($\beta_{19} = .003, p < .01$), LAP ($\beta_{20} = .003, p < .05$), and LAN ($\beta_{22} = -.003, p < .05$). The indirect effect on HAN was not estimated because the relationship between maladaptive strategy use and HAN was not significant. In sum, we found five out of eight possible indirect effects of age on after-work emotions via emotion regulation strategy use. We did not confirm mediation, given that the total effects of age on after-work emotions were all non-significant. Thus, Hypothesis 4 was partially confirmed.

Additional Analyses

Although our theoretical model specified emotion regulation strategy use as mediator of age differences in after-work emotions, we also tested the alternative hypothesis that age and emotion regulation strategies interact in predicting emotional experience. Such moderation effects would suggest that emotion regulation strategies are differentially

Table 2. Means (M), Standard Deviations (SD), ICCs, and Correlations Among the Study Variables

Variable	M	SD	1-ICC	1	2	3	4	5	6	7	8	9	10	11	12	13
Person-level measures ^a																
1. Age	43.47	11.14	—	—												
2. Adaptive strategy use	10.26	3.67	—	.42***	(.75)											
3. Maladaptive strategy use	1.76	1.95	—	-.26*	-.16	(.63)										
4. Gender ^b	—	—	—	.24*	-.03	.07	—									
5. Job tenure	8.83	7.80	—	.43***	.11	-.12	.35***	—								
6. Supervisory responsibilities	—	—	—	.03	.09	.05	.18†	.16	—							
7. Duration of client contact ^c	5.44	2.41	—	-.30**	-.32**	.19†	.20†	-.11	.11	—						
8. Emotional display demands	3.46	0.70	—	-.06	-.09	.15	.15	.05	.08	.28**	(.70)					
9. Emotional sensitivity demands	4.19	0.77	—	.12	.05	.06	.25*	.25*	.00	.29**	.45***	(.91)				
Daily measures ^{d,e}																
10. HAP	2.19	0.63	53.5	.00	.27**	-.18†	-.03	-.11	.09	-.04	-.10	-.08	(.78)			
11. LAP	2.96	0.75	49.6	.19†	.27**	-.25*	.18†	.03	.07	-.13	-.18†	.01	.58***	(.84)		
12. HAN	1.46	0.50	53.3	-.17†	-.33***	.12	-.06	-.02	.15†	.32**	.21*	.02	-.16	-.55***	(.70)	
13. LAN	1.99	0.64	53.2	.05	-.19†	.22*	.09	-.04	.04	.33**	.12	.11	-.30**	-.49***	.60***	(.70)

Note. HAN = high-arousal negative emotions; HAP = high-arousal positive emotions; LAN = low-arousal negative emotions; LAP = low-arousal positive emotions. 1-ICC = Percentage of variance at the day level (ICC = variance at the person level / [variance at the person level + variance at the day level]). Reliability estimates (α), where available, are shown in parentheses along the diagonal.

^aN = 92.

^b0 = female, 1 = male.

^cClient contact in hours per day.

^dN = 832.

^eAggregated across daily entries.

* $p < .10$. ** $p < .01$. *** $p < .001$.

effective for young and older workers. We ran an additional multi-level structural equation model in which we included the main effects of age and (mal)adaptive emotion regulation strategy use, and the

interactions of age with adaptive and maladaptive strategy use when predicting the four types of emotional experience. We composed the interaction terms based on grand-mean centered individual variables.

Table 3. Unstandardized Coefficients of the MSEM Model (M_2) for Testing Main and Mediation Effects on After-Work Emotions

Effect Type	Coefficient	SE	95% CI
Between-person effects			
Slopes			
β_1 : Age $\rightarrow$ ERP adaptive	0.139***	0.031	[0.079, 0.199]
β_2 : Age $\rightarrow$ ERP maladaptive	-0.045**	0.015	[-0.075, -0.015]
β_3 : Adaptive strategy use $\rightarrow$ HAP	0.055**	0.019	[0.018, 0.092]
β_4 : Adaptive strategy use $\rightarrow$ LAP	0.041 [†]	0.024	[-0.006, 0.089]
β_5 : Adaptive strategy use $\rightarrow$ HAN	-0.041*	0.018	[-0.076, -0.007]
β_6 : Adaptive strategy use $\rightarrow$ LAN	-0.037 [†]	0.020	[-0.075, -0.001]
β_7 : Maladaptive strategy use $\rightarrow$ HAP	-0.059*	0.028	[-0.115, -0.003]
β_8 : Maladaptive strategy use $\rightarrow$ LAP	-0.077*	0.038	[-0.152, -0.003]
β_9 : Maladaptive strategy use $\rightarrow$ HAN	0.017	0.029	[-0.039, 0.073]
β_{10} : Maladaptive strategy use $\rightarrow$ LAN	0.076*	0.030	[0.018, 0.135]
β_{11} : Age $\rightarrow$ HAP	-0.010	0.007	[-0.024, 0.004]
β_{12} : Age $\rightarrow$ LAP	0.002	0.008	[-0.012, 0.017]
β_{13} : Age $\rightarrow$ HAN	-0.001	0.006	[-0.012, 0.011]
β_{14} : Age $\rightarrow$ LAN	0.013*	0.006	[0.001, 0.026]
Indirect effects (mediation paths) ^a			
β_{15} : Age $\rightarrow$ Adaptive strategy use $\rightarrow$ HAP	0.008**	0.003	[0.022, 0.146]
β_{16} : Age $\rightarrow$ Adaptive strategy use $\rightarrow$ LAP	^b	^b	^b
β_{17} : Age $\rightarrow$ Adaptive strategy use $\rightarrow$ HAN	-0.006*	0.003	[-0.120, -0.009]
β_{18} : Age $\rightarrow$ Adaptive strategy use $\rightarrow$ LAN	^b	^b	^b
β_{19} : Age $\rightarrow$ Maladaptive strategy use $\rightarrow$ HAP	0.003*	0.001	[0.001, 0.063]
β_{20} : Age $\rightarrow$ Maladaptive strategy use $\rightarrow$ LAP	0.003*	0.002	[0.001, 0.085]
β_{21} : Age $\rightarrow$ Maladaptive strategy use $\rightarrow$ HAN	^b	^b	^b
β_{22} : Age $\rightarrow$ Maladaptive strategy use $\rightarrow$ LAN	-0.003*	0.002	[-0.076, -0.005]
Variances			
Age	122.792***	15.374	[92.660, 152.925]
Residual variances			
Adaptive strategy use	10.921***	1.589	[7.806, 14.037]
Maladaptive strategy use	3.497***	1.015	[1.508, 5.486]
HAP	0.295***	0.046	[0.205, 0.385]
LAP	0.424***	0.083	[0.262, 0.585]
HAN	0.188***	0.040	[0.110, 0.266]
LAN	0.273***	0.050	[0.175, 0.370]
Within-person effects			
Slopes			
β_{23} : Number of diary entry $\rightarrow$ HAP	-0.010	0.008	[-0.026, 0.006]
β_{24} : Number of diary entry $\rightarrow$ LAP	-0.005	0.010	[-0.025, 0.015]
β_{25} : Number of diary entry $\rightarrow$ HAN	-0.006	0.007	[-0.020, 0.008]
β_{26} : Number of diary entry $\rightarrow$ LAN	-0.017 [†]	0.009	[-0.034, 0.001]
Residual variances			
HAP	0.392***	0.032	[0.329, 0.455]
LAP	0.466***	0.034	[0.400, 0.531]
HAN	0.239***	0.030	[0.180, 0.298]
LAN	0.360***	0.032	[0.298, 0.422]

Note. Level 1 $N = 832$; Level 2 $N = 92$. CI = confidence interval; HAN = high arousal negative emotions; HAP = high arousal positive emotions; LAN = low arousal negative emotions; LAP = low arousal positive emotions; MSEM = multilevel structural equation modeling; SE = standard error.

^a CIs of indirect mediation effects were estimated using Monte Carlo estimation method in R.

^b Indirect path was not estimated because the relationship between emotion regulation strategy use and emotions was not significant.

[†] $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

None of the eight possible interaction effects (2 strategies $\times$ 4 types of emotional experience) reached significance (all $ps \geq .08$). Thus, we found no evidence that the beneficial effect of adaptive strategies or the detrimental effect of maladaptive strategies might differ between workers of different ages.

DISCUSSION

In this study, our aim was to paint a nuanced picture of older compared to young workers' emotional experience after a day of work, and the role of emotion-regulation strategy use in shaping emotional experience. In line with prior work in general-population and worker samples, we expected older adults to show a more adaptive profile of emotion regulation strategy use, which would translate into better emotional well-being at the end of the day after work is done. Unexpectedly, in this sample of healthcare workers, we found no age differences in after-work emotions. In line with expectations, however, age was associated with the use of more adaptive and less maladaptive emotion regulation strategies and had an indirect effect on after-work emotions via strategy use. As such, this work pinpoints emotion regulation competence as manifested in a "wiser choice" of strategies to regulate emotions, as an area of strength of older workers relative to young workers, and emotion regulation strategy use, in particular, as an area for interventions to improve worker well-being.

No Main Effect of Age on After-Work Emotions

The lack of age differences in after-work emotions contrasts with several prior studies—including those in worker samples, most notably in the service sector—that older workers experience more positive and less negative emotions (e.g., Bal & Smit, 2012; Wegge et al., 2006). Most of the prior studies have relied on global, retrospective reports of emotions. Interestingly, two prior studies using an experience-sampling design (Sonntag et al., 2008; Yeung & Fung, 2012) also found age to be unrelated to positive and negative emotions. Global, retrospective reports of emotional experience are more strongly prone to information processing and memory biases (Robinson & Clore, 2002), including the age-related positivity effect (Reed & Carstensen, 2012). It is possible that the actual emotional states of young and older workers do not differ so much after all, but that older workers attend to positive emotions more and weigh them more heavily than negative emotions when asked to make global estimations of their typical emotional experience (Luchman, Kaplan, & Dalal, 2012).

Prior research that directly assessed accuracy of emotion recall found indeed that older adults tended to overestimate the positive affect experienced during 2 weeks of experience-sampling more than younger adults, who themselves tended to overestimate negative affect more than older adults (Ready, Weinberger, & Jones, 2007). Socioemotional selectivity theory (Carstensen, 2006) provides a theoretical explanation: Due to their more limited future time perspective, older adults are assumed to be more strongly motivated to maximize current emotional well-being, which in turn, colors their information processing such that they prioritize positive over negative information in attention and memory more than young adults who have an expansive future time perspective (Reed & Carstensen, 2012). Future research should test this possibility by measuring future time perspective directly and by comparing current emotion reports with retrospective ratings of emotions.

Indirect Effect of Age on After-Work Emotions via Strategy Use

Although we failed to confirm a direct association between age and after-work emotions, age was associated with after-work emotions indirectly via differences in the habitual use of emotion regulation strategies. More specifically, older workers endorsed adaptive emotion regulation strategies (such as positive reappraisal and emotion sharing in case of negative emotions, or savoring or positive mental time travel in case of positive emotions) more than young workers. These, in contrast, endorsed maladaptive strategies (such as rumination and substance abuse in case of negative emotions, or fault finding and negative mental time travel in case of positive emotions) more than older workers. Habitual use of adaptive strategies was, in turn, related to higher emotional well-being after work, while habitual use of maladaptive strategies was related to lower emotional well-being. Importantly, there was no evidence that age and emotion regulation strategies interact in predicting after-work emotional well-being. This suggests that when (mal)adaptive strategies were used, they may benefit (or hurt) young and older workers equally. Our findings therefore attest that older workers have an advantage over young workers when it comes to the use of adaptive over maladaptive emotion regulation strategies, presumably attributable to older workers' more extensive experience and practice in dealing with emotional situations throughout life. At the same time, our findings contradict the stereotype of lower emotional resilience with age (Rauschenbach et al., 2012).

Role of Arousal

In the current study, we distinguished four types of emotional states differing in valence and arousal. We did not find robust support for divergent age-related trends in these four types of emotional experience, contrasting prior research in general-population samples (e.g., Kessler & Staudinger, 2009; Scheibe et al., 2013). An important difference between this and prior studies is that we estimated age effects for the four types of emotions simultaneously in a multilevel structural equation model, while prior studies have considered them in isolation. Correlations between the four types are usually observed, which are in line with their position in the affect circumplex model (Russell, 2003). Therefore, analyzing age trends separately per type of emotion may overestimate effects. In our preliminary analyses, we found zero-order correlations between age and person-level aggregates of emotions, though only at trend level, to be in line with expectations that age differences are more pronounced for LAP (positive age association) and HAN (negative age association) compared to HAP and LAN. A comparison of the strength of person-level correlations via an online tool provided by Lee and Preacher (I. A. Lee & Preacher, 2013) reveals, moreover, that the positive association between age and LAP is significantly stronger than the association between age and HAP ($z = -1.98$; $p < .05$); and the association between age and LAN is significantly different from the association between age and HAN ($z = -2.35$, $p < .05$).

These preliminary findings support the potential utility of distinguishing types of emotions when studying aging in worker samples, especially in consideration of an emerging literature on the divergent work-related correlates and consequences of different valence-arousal combinations of affect in work settings (Schaufeli & Salanova, 2014; Warr & Inceoglu, 2012; Warr et al., 2014). If age-related trends towards higher levels of LAP (but maintained levels of HAP) were confirmed

this would imply that older workers are able to draw more satisfaction from their work while being equally engaged compared to young workers. In turn, if age-related trends towards lower levels of HAN (but maintained levels of LAN) were confirmed, it would imply that older workers are less likely than young workers to perform acts of aggression and sabotage but equally likely to show personal withdrawal behaviors. In other words, older workers would show advantages in some but not all types of work-related attitudes and behaviors.

Strengths, Limitations, and Future Directions

One strength of the current study is the repeated assessment of after-work emotions, which allows capturing emotions in close proximity to their occurrence and reducing response bias (Robinson & Clore, 2002). We suggest that this procedure allows for the most valid estimate of the subjective experience of emotions in workers. At the same time, we only took one “snapshot” of momentary emotional experience per day. Emotions naturally fluctuate across the day, impacted by biological rhythms, external events, and personal goal progress, to name just a few possible factors. Additionally, we only sampled subjective experience, while emotional responses also include physiological and behavioral components (Gross, 2015). Future research should sample emotions multiple times throughout the workday, and add physiological and/or behavioral measures. For example, heart rate and blood pressure have shown promise as physiological indicators of emotional experience that can be assessed in work settings (Ilies, Dimotakis, & Watson, 2010).

Another strength is the inclusion of multiple emotion regulation strategies to regulate both negative and positive emotions. Traditionally, negative emotion regulation has received the bulk of research attention, whereas positive emotion regulation has been studied only infrequently in general (e.g., Quoidbach et al., 2010) and in relation to aging (Scheibe et al., 2013). Yet, although the original ERP-R allows for deriving separate scores for positive and negative emotion regulation (Nelis et al., 2011), pragmatic considerations led us to use a shortened version. In this shortened version, subscales of positive and negative emotion regulation strategies were unreliable, which prevented us from deriving separate measures of positive and negative regulation within categories of adaptive and maladaptive strategies. In future research, we therefore recommend the use of longer, more reliable measures of positive and negative emotion regulation. Going even further, it seems useful to distinguish levels of arousal when measuring strategy use. Sheppes and colleagues (2014) showed that the choice of strategies to regulate negative emotions is influenced by stimulus intensity (which is closely related to arousal): People tend to choose engagement strategies for low-intensity negative emotions but convert to choosing avoidance strategies for high-intensity negative emotions. Therefore, the habitual use of strategies to regulate emotions should be assessed separately for different valence-arousal combinations.

Recent theorizing and initial studies have also called attention to the fact that just like emotions, the strategies that people use to regulate emotions may fluctuate from one emotion episode to the next, and even within emotion episodes. Specifically, both the activation of strategies and their effects on emotional responses can vary across contexts (Aldao, 2013). From this perspective, the adaptiveness of emotion regulation strategies is determined by the degree to which they help people to achieve current goals (Gross, 2015). Moreover, flexibly switching between emotion regulation strategies in response

to contextual changes may be more important than the overall use of some strategies over others (Bonanno & Burton, 2013). Despite their clear relevance for work-related processes and outcomes, these concepts have yet to be investigated in work settings. Future research should therefore assess emotion regulation strategies also at the daily level to better capture fluctuations in emotion regulation strategy use, and the effects on emotional well-being.

Further limitations are rooted in the fact that all ratings were provided by a single source, that the design does not allow for inferences regarding a causal ordering of variables, and that only one occupational sector was included. It is possible that emotional states drive emotion regulation strategy use rather than vice versa. Likewise, it is possible that healthy worker effects rather than developmental influences are responsible for age differences. Positive age differences in strategy use may not generalize to all sectors. In fact, due to the strong emotional demands inherent in the health care sector, age differences in emotion regulation competence may be stronger in this sector compared to occupational sectors with lower emotional demands (e.g., sales, manufacturing). After all, this sector provides a platform for workers to encounter and practice dealing with emotional situations as part of their job role. Work experiences can influence people's functioning over time (Schooler, Mulatu, & Oates, 1999). Future research may address these limitations and alternative explanations by using multiple sources (e.g., physiological measures of emotions) and following workers from multiple occupational sectors across several years to detect within-person changes in strategy use with age, and the moderating influence of career experiences.

Implications for Practice

The current findings suggest that older healthcare workers excel in using generally adaptive over maladaptive strategies to manage emotions, which benefits their emotional well-being after a day of work, a time that is so essential for recovery from daily work demands and the replenishing of resources. Human resource professionals may be intrigued to learn about this strength of older workers, which flies in the face of stereotypes of older workers as being vulnerable and low in emotional resilience. Emotion regulation competence of older workers may well be an untapped resource in the aging workforce that can be better exploited, for example, by assigning older workers mentoring roles for young workers (Doerwald, Scheibe, & Van Yperen, 2015). Psychosocial support is a key function of mentoring relationships and focuses on the personal development of the protégé and higher competence in dealing with emotionally challenging situations (Kram, 1988). Older mentors may be well equipped to transfer knowledge on managing emotions in such situations.

Another practical implication follows from the clear pattern of finding regarding links between strategy use and emotional well-being. These findings provide concrete information which groups of strategies employees should generally use, or avoid, in order to optimize emotional experiences and ultimately job engagement and performance. This information is helpful and can easily be implemented in organizational interventions that aim to foster effective emotion regulation in employees (e.g., Hülsheger, Lang, Schewe, & Zijlstra, 2015).

CONCLUSION

The present work deepens knowledge of how age impacts on workers' emotional experience, one important class of daily work experiences that

prior research has identified as driver of various critical work behaviors and outcomes. Although age had no direct association with after-work emotions, it was associated with emotional experience indirectly via a “wiser choice” in the use of strategies to regulate emotions. The research highlights emotion regulation competence as a potential strength of older workers and provides concrete information for designing interventions aiming to improve emotional functioning and well-being. Findings may also come as good news to aging workers and their supervisors who hold stereotypes of older age as a time of loss and decline.

ACKNOWLEDGMENTS

We acknowledge Jan Luca Pletzer for providing access to the psychotherapist experts.

REFERENCES

- Aldao, A. (2013). The future of emotion regulation research: Capturing context. *Perspectives on Psychological Science*, 8, 155–172. doi: 10.1177/1745691612459518
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, 30, 217–237. doi: 10.1016/j.cpr.2009.11.004
- Bal, P. M., & Smit, P. (2012). The older the better! Age-related differences in emotion regulation after psychological contract breach. *Career Development International*, 17, 6–24. doi: 10.1108/13620431211201300
- Barsade, S. G., & Gibson, D. E. (2007). Why does affect matter in organizations? *The Academy of Management Perspectives*, 21, 36–59. doi: 10.5465/AMP.2007.24286163
- Blanchard-Fields, F. (2007). Everyday problem solving and emotion: An adult developmental perspective. *Current Directions in Psychological Science*, 16, 26–31. doi: 10.1111/j.1467-8721.2007.00469.x
- Blanchard-Fields, F., Mienaltowski, A., & Seay, R. B. (2007). Age differences in everyday problem-solving effectiveness: Older adults select more effective strategies for interpersonal problems. *Journal of Gerontology: Psychological Sciences*, 62B, P61–P64. doi: 10.1037/0882-7974.12.4.684
- Bolger, N., & Laurenceau, J.-P. (2013). *Intensive longitudinal methods: An introduction to diary and experience sampling research*. New York, NY: Guildford Press.
- Bonanno, G. A., & Burton, C. L. (2013). Regulatory flexibility: An individual differences perspective on coping and emotion regulation. *Perspectives on Psychological Science*, 8, 591–612. doi: 10.1177/1745691613504116
- Carstensen, L. L. (2006). The influence of a sense of time on human development. *Science*, 312, 1913–1915. doi: 10.1126/science.1127488
- Carstensen, L. L., Turan, B., Scheibe, S., Ram, N., Ersner-Hershfield, H., Samanez-Larkin, G. R., ... Nesselroade, J. R. (2011). Emotional experience improves with age: Evidence based on over 10 years of experience sampling. *Psychology and Aging*, 26, 21–33. doi: 10.1037/a0021285
- Charles, S. T. (2010). Strength and vulnerability integration: A model of emotional well-being across adulthood. *Psychological Bulletin*, 136, 1068–1091. doi: 10.1037/a0021232
- Charles, S. T., & Carstensen, L. L. (2008). Unpleasant situations elicit different emotional responses in younger and older adults. *Psychology and Aging*, 23, 495–504. doi: 10.1037/A0013284
- Charles, S. T., & Carstensen, L. L. (2010). Social and emotional aging. *Annual Review of Psychology*, 61, 383–409. doi: 10.1146/annurev.psych.093008.100448
- Charles, S. T., Reynolds, C. A., & Gatz, M. (2001). Age-related differences and change in positive and negative affect over 23 years. *Journal of Personality and Social Psychology*, 80, 136–151. doi: 10.1037/0022-3514.80.1.136
- Cheung, F. Y.-L., & Tang, C. S.-k. (2010). Effects of age, gender, and emotional labor strategies on job outcomes: Moderated mediation analyses. *Applied Psychology: Health and Well-Being*, 2, 323–339. doi: 10.1111/j.1758-0854.2010.01037.x
- Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64, 89–136. doi: 10.1111/j.1744-6570.2010.01203.x
- Dahling, J. J., & Perez, L. A. (2010). Older worker, different actor? Linking age and emotional labor strategies. *Personality and Individual Differences*, 48, 574–578. doi: 10.1016/j.paid.2009.12.009
- Doerwald, F., Scheibe, S., & Van Yperen, N. (2015). Role of age in workplace mentoring. In N. A. Pachana (Ed.), *Encyclopedia of geropsychology* (pp. 1–8). Singapore: Springer. doi: 10.1007/978-981-287-080-3_34-1
- Doerwald, F., Scheibe, S., Zacher, H., & Van Yperen, N. W. (2016). *Emotional competencies across adulthood: State of knowledge and implication for the work context*. Manuscript submitted for publication.
- Enders, C. K., & Tofighi, D. (2007). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods*, 12, 121–138. doi: 10.1037/1082-989X.12.2.121
- English, T., & Carstensen, L. L. (2014). Emotional experience in the mornings and the evenings: Consideration of age differences in specific emotions by time of day. *Frontiers in Psychology*, 5, 185. doi: 10.3389/fpsyg.2014.00185
- Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. *Personality and Individual Differences*, 30, 1311–1327. doi: 10.1016/S0191-8869(00)00113-6
- Glomb, T. M., Kammeyer-Mueller, J. D., & Rotundo, M. (2004). Emotional labor demands and compensating wage differentials. *Journal of Applied Psychology*, 89, 700–714. doi: 10.1037/0021-9010.89.4.700
- Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, 26, 1–26. doi: 10.1080/1047840X.2014.940781
- Heller, D., Watson, D., & Ilies, R. (2006). The dynamic process of life satisfaction. *Journal of Personality*, 74, 1421–1450. doi: 10.1111/j.1467-6494.2006.00415.x
- Hertel, G., Rauschenbach, C., Thielgen, M. M., & Krumm, S. (2015). Are older workers more active copers? Longitudinal effects of age-contingent coping on strain at work. *Journal of Organizational Behavior*. doi: 10.1002/job.1995
- Hertel, G., & Zacher, H. (2015). Managing the aging workforce. In C. Viswesvaran, N. Anderson, D. S. Ones & H. K. Sinangil (Eds.),

- The SAGE handbook of industrial, work, & organizational psychology* (Vol. 3, 2nd ed.). New York: Sage.
- Hülshager, U. R., Lang, J. W. B., Schewe, A. F., & Zijlstra, F. R. H. (2015). When regulating emotions at work pays off: A diary and an intervention study on emotion regulation and customer tips in service jobs. *Journal of Applied Psychology*, 100, 263–277. doi: 10.1037/a0038229
- Hülshager, U. R., & Schewe, A. F. (2011). On the costs and benefits of emotional labor: A meta-analysis of three decades of research. *Journal of Occupational Health Psychology*, 16, 361–389. doi: 10.1037/a0022876
- Iliis, R., Dimotakis, N., & Watson, D. (2010). Mood, blood pressure, and heart rate at work: An experience-sampling study. *Journal of Occupational Health Psychology*, 15, 120–130. doi: 10.1037/a0018350
- Isaacowitz, D. M., & Blanchard-Fields, F. (2012). Linking process and outcome in the study of emotion and aging. *Perspectives on Psychological Science*, 7, 3–17. doi: 10.1177/1745691611424750
- John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality*, 72, 1301–1333. doi: 10.1111/j.1467-6494.2004.00298.x
- Johnson, S. J., Holdsworth, L., Hoel, H., & Zapf, D. (2013). Customer stressors in service organizations: The impact of age on stress management and burnout. *European Journal of Work and Organizational Psychology*, 22, 318–330. doi: 10.1080/1359432X.2013.772581
- Kessler, E. M., & Staudinger, U. M. (2009). Affective experience in adulthood and old age: The role of affective arousal and perceived affect regulation. *Psychology and Aging*, 24, 349–362. doi: 10.1037/A0015352
- Kram, K. E. (1988). *Mentoring at work: Developmental relationships in organizational life*. Lanham, MD: University Press of America.
- Kuba, K., & Scheibe, S. (in press). Let it be and keep on going! Acceptance and daily occupational well-being in relation to negative work events. *Journal of Occupational Health Psychology*. doi:10.1037/a0040149
- Kunzmann, U., Little, T. D., & Smith, J. (2000). Is age-related stability of subjective well-being a paradox? Cross-sectional and longitudinal evidence from the Berlin Aging Study. *Psychology and Aging*, 15, 511–526. doi:10.1037/0882-7974.15.3.511
- Kunzmann, U., Richter, D., & Schmukle, S. C. (2013). Stability and change in affective experience across the adult life span: Analyses with a national sample from Germany. *Emotion*, 13, 1086–1095. doi: 10.1037/a0033572
- Labouvie-Vief, G., Lumley, M. A., Jain, E., & Heinze, H. (2003). Age and gender differences in cardiac reactivity and subjective emotion responses to emotional autobiographical memories. *Emotion*, 3, 115–126. doi: 10.1037/1528-3542.3.2.115
- Lawton, M. P., Kleban, M. H., Rajagopal, D., & Dean, J. (1992). Dimensions of affective experience in three age groups. *Psychology and Aging*, 7, 171–184. doi: 10.1037/0882-7974.7.2.171
- Lee, I. A., & Preacher, K. J. (2013, September). Calculation for the test of the difference between two dependent correlations with one variable in common [Computer software]. Retrieved from <http://quantpsy.org>
- Lee, K., & Allen, N. J. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology*, 87, 131–142. doi: 10.1037/0021-9010.87.1.131
- Luchman, J. N., Kaplan, S. A., & Dalal, R. S. (2012). Getting older and getting happier with work: An information-processing explanation. *Social Indicators Research*, 108, 535–552. doi: 10.1007/s11205-011-9892-8
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnysky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, 61, 20–52. doi: 10.1006/jvbe.2001.1842
- Morgan, E. S., & Scheibe, S. (2014). Reconciling cognitive decline and increased well-being with age: The role of increased emotion regulation efficiency. In P. Verhaeghen & C. Hertzog (Eds.), *Emotion, social cognition, and everyday problem solving during adulthood* (pp. 155–171). Oxford: Oxford University Press. doi:10.1093/oxfordhob/9780199899463.013.007
- Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. *Journal of Personality and Social Psychology*, 75, 1333–1349. doi: 10.1037/0022-3514.75.5.1333
- Muthén, L. K., & Muthén, B. O. (1998–2012). *Mplus user's guide* (7th ed.). Los Angeles, CA: Author.
- Nelis, D., Quoidbach, J., Hansenne, M., & Mikolajczak, M. (2011). Measuring individual differences in emotion regulation: The Emotion Regulation Profile-Revised (ERP-R). *Psychological Belgia*, 51, 49–91. doi:10.5334/pb-51-1-49
- Peña-Sarrionandia, A., Mikolajczak, M., & Gross, J. J. (2015). Integrating emotion regulation and emotional intelligence traditions: A meta-analysis. *Frontiers in Psychology*, 6, 160. doi: 10.3389/fpsyg.2015.00160
- Phillips, L. H., Henry, J. D., Hosie, J. A., & Milne, A. B. (2006). Age, anger regulation and well-being. *Aging & Mental Health*, 10, 250–256. doi: 10.1080/13607860500310385
- Posthuma, R. A., & Campion, M. A. (2009). Age stereotypes in the workplace: Common stereotypes, moderators, and future research directions. *Journal of Management*, 35, 158–188. doi: 10.1177/0149206308318617
- Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods*, 15, 209–233. doi: 10.1037/a0020141
- Quoidbach, J., Berry, E. V., Hansenne, M., & Mikolajczak, M. (2010). Positive emotion regulation and well-being: Comparing the impact of eight savoring and dampening strategies. *Personality and Individual Differences*, 49, 368–373. doi:10.1016/j.paid.2010.03.048
- Rauschenbach, C., Göritz, A. S., & Hertel, G. (2012). Age stereotypes about emotional resilience at work. *Educational Gerontology*, 38, 511–519. doi: 10.1080/03601277.2011.567187
- Ready, R. E., Weinberger, M. I., & Jones, K. M. (2007). How happy have you felt lately? Two diary studies of emotion recall in older and younger adults. *Cognition & Emotion*, 21, 728–757. doi:10.1080/02699930600948269
- Reed, A. E., & Carstensen, L. L. (2012). The theory behind the age-related positivity effect. *Frontiers in Psychology*, 3, 339. doi: 10.3389/fpsyg.2012.00339
- Riediger, M., Schmiedek, F., Wagner, G. G., & Lindenberger, U. (2009). Seeking pleasure and seeking pain: Differences in prohedonic and contra-hedonic motivation from adolescence to old age. *Psychological Science*, 20, 1529–1535. doi: 10.1111/j.1467-9280.2009.02473.x

- Robinson, M. D., & Clore, G. L. (2002). Belief and feeling: Evidence for an accessibility model of emotional self-report. *Psychological Bulletin*, 128, 934–960. doi: 10.1037/0033-2909.128.6.934
- Ross, C. E., & Mirowsky, J. (2008). Age and the balance of emotions. *Social Science & Medicine*, 66, 2391–2400. doi: 10.1016/j.socscimed.2008.01.048
- Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review*, 110, 145–172. doi: 10.1037/0033-295X.110.1.145
- Schaufeli, W. B., & Salanova, M. (2014). Burnout, boredom and engagement at the workplace. In M. C. W. Peeters, J. de Jonge, & T. W. Taris (Eds.), *People at work: An introduction to contemporary work psychology* (pp. 293–320). Hoboken, NJ: Wiley.
- Scheibe, S., English, T., Tsai, J. L., & Carstensen, L. L. (2013). Striving to feel good: Ideal affect, actual affect, and their correspondence across adulthood. *Psychology and Aging*, 28, 160–171. doi: 10.1037/a0030561
- Scheibe, S., Mata, R., & Carstensen, L. L. (2011). Age differences in affective forecasting and experienced emotion surrounding the 2008 US presidential election. *Cognition & Emotion*, 25, 1029–1044. doi: 10.1080/02699931.2010.545543
- Scheibe, S., Stamov-Roßnagel, C., & Zacher, H. (2015). Links between emotional job demands and occupational well-being: Age differences depend on type of demand. *Work, Aging, and Retirement*, 1, 254–265. doi: 10.1093/workar/wav007
- Scheibe, S., Wisse, B., & Schulz, A. (2015). Affect and emotion regulation in aging workers. In N. A. Pachana (Ed.), *Encyclopedia of geropsychology* (pp. 1–12). Singapore: Springer. doi:10.1007/978-981-287-080-3_32-1
- Scheibe, S., & Zacher, H. (2013). A lifespan perspective on emotion regulation, stress, and well-being in the workplace. In P. L. Perrewé, J. Halbesleben, & C. C. Rosen (Eds.), *Research in occupational stress and well being* (Vol. 11, pp. 167–197). Bingley, UK: Emerald. doi:10.1108/S1479-3555(2013)0000011010
- Schooler, C., Mulatu, M. S., & Oates, G. (1999). The continuing effects of substantively complex work on the intellectual functioning of older workers. *Psychology and Aging*, 14, 483–506.
- Selig, J. P., & Preacher, K. J. (2008, June). Monte carlo method for assessing mediation: An interactive tool for creating confidence intervals for indirect effects [computer software]. Retrieved from <http://quantpsy.org/>
- Sheppes, G., Scheibe, S., Suri, G., Radu, P., Blechert, J., & Gross, J. J. (2014). Emotion regulation choice: A conceptual framework and supporting evidence. *Journal of Experimental Psychology: General*, 143, 163–181. doi: 10.1037/a0030831
- Sliter, M., Chen, Y., Withrow, S., & Sliter, K. (2013). Older and (emotionally) smarter? Emotional intelligence as a mediator in the relationship between age and emotional labor strategies in service employees. *Experimental Aging Research*, 39, 466–479. doi: 10.1080/0361073X.2013.808105
- Sonnentag, S. (2012). Psychological detachment from work during leisure time: The benefits of mentally disengaging from work. *Current Directions in Psychological Science*, 21, 114–118. doi: 10.1177/09637214111434979
- Sonnentag, S., Binnewies, C., & Mojza, E. J. (2008). “Did you have a nice evening?” A day-level study on recovery experiences, sleep, and affect. *Journal of Applied Psychology*, 93, 674. doi: 10.1037/0021-9010.93.3.674
- Spector, P. E., & Fox, S. (2002). An emotion-centered model of voluntary work behavior: Some parallels between counterproductive work behavior and organizational citizenship behavior. *Human Resource Management Review*, 12, 269–292. doi: 10.1016/S1053-4822(02)00049-9
- Stone, A. A., Schwartz, J. E., Broderick, J. E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. *Proceedings of the National Academy of Sciences of the United States of America*, 107, 9985–9990. doi: 10.1073/pnas.1003744107
- Truxillo, D. M., Cadiz, D. M., & Hammer, L. B. (2015). Supporting the aging workforce: A review and recommendations for workplace intervention research. *Annual Review of Organizational Psychology and Organizational Behavior*, 2, 12.11–12.31. doi: 10.1146/annurev-orgpsych-032414-111435
- Warr, P., Bindl, U. K., Parker, S. K., & Inceoglu, I. (2014). Four-quadrant investigation of job-related affects and behaviours. *European Journal of Work and Organizational Psychology*, 23, 342–363. doi: 10.1080/1359432X.2012.744449
- Warr, P., & Inceoglu, I. (2012). Job engagement, job satisfaction, and contrasting associations with person–job fit. *Journal of Occupational Health Psychology*, 17, 129–138. doi: 10.1037/a0026859
- Wegge, J., van Dick, R., Fisher, G. K., West, M. A., & Dawson, J. F. (2006). A test of basic assumptions of affective events theory (AET) in call centre work. *British Journal of Management*, 17, 237–254. doi: 10.1111/j.1467-8551.2006.00489.x
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior* (Vol. 18, pp. 1–74). Elsevier Science/JAI Press.
- Yeung, D. Y., & Fung, H. H. (2012). Impacts of suppression on emotional responses and performance outcomes: An experience-sampling study in younger and older workers. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 67, 666–676. doi: 10.1093/geronb/gbr159
- Yeung, D. Y., Wong, C. K. M., & Lok, D. P. P. (2011). Emotion regulation mediates age differences in emotions. *Aging & Mental Health*, 15, 414–418. doi: 10.1080/13607863.2010.536136
- Zapf, D., Vogt, C., Seifert, C., Mertini, H., & Isic, A. (1999). Emotion work as a source of stress: The concept and development of an instrument. *European Journal of Work and Organizational Psychology*, 8, 371–400. doi: 10.1080/135943299398230